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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,683	08/19/2003	Robert A. Dunstan	110349-133957	6454

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EXAMINER

RUTLAND WALLIS, MICHAEL

ART UNIT	PAPER NUMBER
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2836

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/644,683

Applicant(s)

DUNSTAN, ROBERT A.

Examiner

Michael Rutland-Wallis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 11/20/2006 have been fully considered but they are not persuasive.

Applicant alleges Lioux fails to teach every claimed limitation. Specifically Applicant cites the limitations

- placement of an apparatus into a suspended-to-memory state, after switching to powering the apparatus with backup power, in response to an absence of AC condition, and
- shutting off the apparatus after the apparatus is in the suspended-to-memory for a period of time.

Where Applicant contends the method of operation of Lioux consists of going straight to a shut down in response to an AC absent condition and does place the apparatus into a suspended-to-memory state.

In response to the above assertion Applicants are directed to the to col. 6 lines 10-20 as identified in the previous action, wherein Linux discloses (specifically underlined section).

As previously described, this signal causes a System Controlled Interrupt to which the operating system gives control to the BIOS. The BIOS reacts by requesting the operating system to perform a safe shutdown of the system--step 512. If the computer is in a suspend to RAM mode which requires auxiliary power, then the BIOS will detect the change to SCI register 109 and cause the operating system to first awake the computer to allow it to subsequently pass into a suspend to disk mode which does not

require any auxiliary power. This process could take 1-2 minutes to complete.

Lioux therefore does not as Applicant contends go straight to shutdown in response to an AC absent condition. Lioux suspends the system to disk (i.e. memory) before proceeding to safe shut down procedure of step 512.

Therefore Lioux teaches all the claimed limitations of claim 1 and similarly 15, 30, 12 and 31.

Applicants remaining arguments depend directly of indirectly for the above and accordingly are additionally maintained.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 12, 15 and 30-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Lioux et al. (U.S. Pat. No. 6,274,949)

With respect to claims 1 and 15 Lioux teaches in apparatus (computer) a method of operation comprising powering the apparatus from a backup source (backup battery unit item 50), in response to the apparatus being in an AC absence condition (column 4 lines 14-19); initiating a suspend to memory process to place the apparatus in a suspend to memory state (see process disclosed in Fig. 4 and further see item 512

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described in column 6 lines 10-20 "suspend to disc mode); wherein no further activities occurs while the apparatus is in the suspend to memory state including suspension of all data transmissions and after further drawing on the backup power source for a period of time (1-2 minutes column 6 line 19-20 the time taken to safely suspend the state of the computer) while the apparatus is in the suspend to memory state, automatically shutting off the backup power source (column 6 lines 22-32).

With respect to claim 12 Lioux teaches monitoring for absence of AC to the power supply (see Fig. 4); and generating a signal indicating AC absence on detection (signals 104 and 107 are supplied to item 50 to indicate the AC power has failed column 6 line 65 – column 5 line 5) of AC to the power supply.

With respect to claim 30 Lioux teaches a power supply comprising: an output interface (the power supply interface to the components); a backup power source (item 50); and a switch (item 220) conditionally coupling the integral backup power source to the output interface to output power through the output interface during absence of AC to the power supply, including a control interface (see Figs. 1 and 4 Lioux describes the control to suspend to disc mode and safely shut down the apparatus) accessible during a suspended-to-memory state of a host device hosting the power supply to allow the backup power source to be uncoupled (column 6 lines 22-32) from the output interface to stop the backup power source from outputting power through the output interface after the host device has entered the suspended-to-memory state, during which state no data are transmitted and further after the host device has drawn on the backup power

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source for a time period (1-2 minutes column 6 line 19-20 the time taken to safely suspend the state of the computer).

With respect to claim 31 Lioux teaches monitoring for absence of AC to the power supply (see Fig. 4); and generating a signal indicating AC absence on detection (signals 104 and 107 are supplied to item 50 to indicate the AC power has failed column 6 line 65 – column 5 line 5) of AC to the power supply.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-3 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lioux et al. (U.S. Pat. No. 6,274,949)

With respect to claims 2 and 16 Lioux teaches the use of initiating a wait (see column 5 line 64 - column 6 line 4) to initiate waking of the apparatus after the period of time (4-5 seconds), to facilitate the shutting off of the backup power source (BBU). Lioux is silent on the type of timing means used to time the wait state it would have been obvious to one of ordinary skill in the art at the time of the invention to use any suitable timing means found in personal computers such as a timer or real time clock to properly verify the wait state has elapsed.

With respect to claims 3 and 17 Lioux teaches the placing comprises intervening by a BIOS (column 6 lines 15-20) in a process initiated by an OS of the apparatus to suspend the apparatus to memory, in response to the AC absence condition, to initiate waking of the apparatus after the period of time.

Claims 4-6, 9 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lioux et al. (U.S. Pat. No. 6,274,949) in view of Wong (U.S. Pat. No. 6,509,657)

With respect to claims 4, 9 and 18 Lioux teaches the use of a BIOS in the waking of the apparatus. Lioux further teaches if after the wait state the AC power is returned is normal the transition to the suspended state is cancelled (column 6 lines 1-6). Lioux does not describe in detail of the operation of the BIOS and does not teach a BIOS canceling the waking of the apparatus in response to an AC re-present condition. Wong teaches an interrupt handler routine and BIOS interface which comprises a self test to test whether the system is running on AC power or backup power and canceling or not allowing the powering up of the apparatus if the AC power is not present. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Lioux to further include the use of the self test to cancel the return to waking if AC conditions are not present in order to conserve the backup power source.

With respect to claim 5 Lioux teaches a BIOS in a process initiated by an operating system of the apparatus to suspend the apparatus to memory, Lioux does not teach the detailed of the response to the AC absence condition, to schedule the RTC to initiate waking of the apparatus after the period of time. Wong teaches operating system

with a BIOS to facilitate the apparatus to suspended memory state. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the OS and BIOS of Wong in the device of Lioux in order to conserve the reserve battery.

With respect to claim 6 Wong teaches program instructions which are designed to facilitate enabling the apparatus to perform the shut off conditioned when AC remains absent at the apparatus. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Wong to use the logic of turning off the device based on a real time clock of the type seen in Lioux in order to better conserve the battery life of the reserve source.

With respect to claim 19 Lioux teaches a BIOS to shut off the backup source the after the system is properly shutdown. Wong teaches operating system with a BIOS to facilitate the apparatus to suspended memory state. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the OS and BIOS of Wong in the device of Lioux in order to conserve the reserve battery.

With respect to claim 20 Lioux teaches a BIOS which is further equipped to cause the backup the backup source to shut off the backup source when AC power is absent. Wong teaches operating system with a BIOS to facilitate the apparatus to suspended memory state. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the OS and BIOS of Wong in the device of Lioux in order to conserve the reserve battery.

Claims 7, 10-11, 21, 29 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lioux et al. (U.S. Pat. No. 6,274,949)

With respect to claims 7, 21 and 32 Lioux teaches arrangement comprises a computer wherein the shutting off of the backup power source, after the computer is properly shutdown the battery is shut down in order to conserve battery life. The use of a timer is not disclosed in Lioux some sort of timing means is required in the design of Lioux in order to time the establish the beginning and end of the wait state. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a timer or clock in order to verify the end of the wait state in order to facilitate the switching of the primary and backup sources.

With respect to claim 10 Lioux's timer expires after about 5 seconds. Lioux teaches a system also uses interfaces with the OS, BIOS and SCI registers any of which may be interpreted as companion logic.

With respect to claim 11 Lioux's system shuts off the back source if the AC remains absent.

With respect to claim 26 Lioux teaches a controller (motherboard) to control at least a selected one of an input and an output of the system, and the timer is a part of the controller.

With respect to claim 29 Lioux teaches the system is a computer system or a personal computer system Lioux mentions network communications briefly in column 1 lines 45-55 it is well know to one of ordinary skill in the art to provide a network interface on personal computer systems such as that of Lioux if it is the position of applicant such an interface is not already present in the computer system of Lioux.

Claims 13-14 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lioux et al. (U.S. Pat. No. 6,274,949) in view of Brown (U.S. Pat. No. 5, 854,904)

With respect to claims 13 and 14 Lioux teaches the monitoring and generating are performed by the supply and communicated via the motherboard. While Lioux shows all components are separate, it is held by the examiner that the power supply line output of the motherboard may be considered the output of the power supply as it supplies power to the controlled devices. Brown teaches a similar configuration where a power supply is coupled to control elements and monitoring components to aid in the switching to and from a backup source. Brown teaches a power supply which contains all the components necessary to control the power requirements of a computer. Brown in fact refers to his power supply module as a small computer col. 11 line 23 further see col. 11 lines 15-53. It would have been obvious to one of ordinary skill in the art to use or consider the power supply where the power is fed to the device in order to enable a power supply capable of controlling and switching to a backup system when the primary system power is unreliable or to modify Lioux to use the power supply module (item 82 Brown) of Brown to enable a power supply capable of controlling and switching to a backup system when the primary system power is unreliable.

With respect to claim 27 Brown teaches the timer is a part of the power supply.

With respect to claim 28 Lioux as modified by brown teaches the arrangement is further equipped to facilitate specification of the period of time to the system.

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Claims 8, 22-25 and 33-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lioux et al. (U.S. Pat. No. 6,274,949) in view of Wong et al. (U.S. Pat. No. 6,509,657)

With respect to claim 8 and 22 Lioux teaches the apparatus of claim 9 but do not teach the use of a BIOS to couple the timer to intervene in a process initiated by the OS to suspend the system. Wong teaches the system uses Microsoft® Windows 98® which is known to store personal settings and configurations in memory when the system is properly shut down and Wong's system is designed to enable the user to properly shut the system down column 6 lines 35-45. Once the user is displayed an alert message by the timer indicating the remaining time the user may intervene to properly shut down the system to enable the storing of the current configuration of the system to memory. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the process of Lioux to include the use of a BIOS as seen in Wong in order to provide a more sophisticated user interface to the system to enable the user to intervene in the system response.

With respect to claim 23 Wong teaches an interrupt handler routine and BIOS interface which comprises a self test to test whether the system is running on AC power or backup power and canceling or not allowing the powering up of the apparatus if the AC power is not present. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Lioux to further include the use of the self test to cancel the return to waking if AC conditions are not present in order to conserve the backup power source.

With respect to claim 24 Lioux teaches a signal to turn off the backup power device at the expiration of the timer.

With respect to claim 25 Lioux teaches the circuit is further equipped to receive an AC condition signal indicating whether AC presence or absence, and condition the generation of the shut off signal based on the AC condition signal.

With respect to claim 33 Lioux teaches a storage medium (memory onboard the mother board), a plurality of programming instruction stored therein, designed to enable an apparatus to be able to perform, setting a timer (wait state) to expire after the period of time (4-5 seconds), to facilitate shutting off a backup power source.

With respect to claim 34 Lioux teaches the device of claim 33 but does go into sufficient detail in the programming instructions. Wong teaches the programming instructions are further designed to perform setting the timer, when intervening in a process to suspend the apparatus to memory. Wong teaches the system uses Microsoft® Windows 98® which is know to store personal settings and configurations in memory when the system is properly shut down and Wong's system is designed to enable the user to properly shut the system column 6 lines 35-45. Once the user is displayed the alert message by the timer indicating the reaming time the supply may be switched off as taught by Lioux to conserve power once proper shut down requirements have been met.

With respect to claim 35 Lioux teaches the device of claim 33 but does go into sufficient detail in the programming instructions. Wong teaches an interrupt handler routine and BIOS interface which comprises a self test to test whether the system is

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running on AC power of backup power and canceling or not allowing the powering up of the apparatus if the AC power is not present. It would have been obvious to one of ordinary skill in the art at the time of the invention to use of the self test to cancel the return to waking if AC conditions are not present in order to conserve the backup power source.

With respect to claim 36 Lioux teaches the device of claim 33 but does go into sufficient detail in the programming instructions. Wong teaches program instructions which would enable the user to shut off the back source. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Wong to use the logic of turning off the device based on a clock of the type seen in Lioux in order to better conserve the battery life of the reserve source.

With respect to claim 37 Lioux teaches the device of claim 33 but does go into sufficient detail in the programming instructions. Wong teaches program instructions which are designed to facilitate enabling the apparatus to perform the shut off when AC remains absent at the apparatus. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Wong to use the logic of turning off the device based on a timer of the type seen in Lioux in order to better conserve the battery life of the reserve source.

With respect to claim 38 Lioux teaches the device of claim 33 but does go into sufficient detail in the programming instructions. Wong teaches the BIOS is used to interface motherboard and the micro-controller and select the selected setting (column 1 lines 1-45).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Rutland-Wallis whose telephone number is 571-272-5921. The examiner can normally be reached on Monday-Thursday 7:30AM-6:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn D. Feild can be reached on 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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